METHOD OF FORMING OPPOSING INTERNALLY PRELOADED CONICAL ELASTOMERIC BEARING ASSEMBLY

ABSTRACT OF THE DISCLOSURE

A method is provided for producing an elastomeric conical flap bearing assembly for rotary aircraft including an inboard bearing element and outboard bearing element disposed within an outer housing. The outer housing has an outer surface configured with a plurality of radially extending flange elements. The outer housing has an inner surface configured to receive tapered conical bearing elements. A tapered conical elastomeric inboard bearing element is inserted into its outer housing and is bonded to the inner surface. A tapered conical elastomeric outboard bearing element is inserted into the outer housing, wherein the conical tapers of the respective bearing elements are directed in opposing directions. The bearing elements are press-fit together and the outer surface of the outboard bearing is bonded to the inner surface of the outer housing forming a bearing assembly. Simultaneously, an axial pre-load is applied to the bearing assembly. A plurality of bearing coupler lugs are attached to the bearing assembly.